



NORTHFIRE 3400 3400-DVTR20N-2

SN 8605 and up

DIRECT VENT TOP/REAR
GAS FIREPLACE

FOR USE WITH NATURAL GAS OR PROPANE*

USERS' INSTALLATION OPERATION AND MAINTENANCE MANUAL

WARNING: If the information in this manual is not followed exactly, fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- * Do not try to light any appliance.
- * Do not touch any electrical switch; do not use any phone in your building.
- * Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- * If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

*Conversion kit required for Propane use

Installer: Please leave this manual with the appliance owner for future reference

STATE OF MASSACHUSETTS REQUIREMENTS

5.08: Modifications to NFPA-54, Chapter 10

(2) Revise 10.8.3 by adding the following additional requirements:

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. **INSTALLATION OF CARBON MONOXIDE DETECTORS.** At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors

a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. **APPROVED CARBON MONOXIDE DETECTORS.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. **SIGNAGE.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, "**GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS**".

4. **INSPECTION.** The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

(b) **EXEMPTIONS:** The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and

2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) **MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM PROVIDED.** When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

1. Detailed instructions for the installation of the venting system design or the venting system components; and

2. A complete parts list for the venting system design or venting system.

(d) **MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED.** When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and

2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

For the State of Massachusetts, installation and repair must be done by a plumber or gasfitter licensed in the Commonwealth of Massachusetts.

For the State of Massachusetts, flexible connectors shall not exceed 36 inches in length.

The State of Massachusetts requires the installation of a carbon monoxide alarm in accordance with NFPA 720 and a CO alarm with battery back up in the same room where the gas appliance is installed.

For the State of Massachusetts the appliances individual shut – off must be a t-handle type valve.

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INTRODUCTION

Thank you for purchasing the Northfire 3400 Direct Vent Built-in Gas Fireplace Heater.

The Northfire 3400 is one of the most advanced gas fireplace heaters on the market. It is designed using the latest technology and manufactured to the highest quality.

Some of the many features are:

- * Small Size The Northfire 3400 is compact enough to fit into almost any size room.
- * Heater Classification The Northfire 3400 is classified as a heating appliance. Therefore, it can be operated continuously for zone heating.
- * High Efficiency The Northfire 3400 has high efficiency, which means that it is less expensive to operate.
- * Adjustable Flame The flame aesthetics and heat output can be adjusted to suit the owner's mood and heating needs.
- * Solid Construction The Northfire 3400 is constructed mainly of satin coated and galvanized steel for long life and durability.
- * Convertible The Northfire 3400 is easily convertible between top and rear vent configurations.

Please read the manual carefully prior to installation and operation of the appliance. Proper installation, operation and maintenance of the appliance will provide you with many years of enjoyment.

CAUTION

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

Children and adults should be alerted to the hazards of high surface temperature and stay away to avoid burns or clothing ignition.

Young children should be carefully supervised when they are in the same room as the appliance.

Clothing or other flammable material should not be placed on or near the appliance.

Do not operate with cracked or broken glass. Be careful not to strike or slam the glass.

Any safety screen or guard removed for servicing an appliance must be replaced prior to operating.

Installation and Repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that the control compartments, burners and circulating air passageways of the appliance are kept clean.

GENERAL INFORMATION

APPLIANCE CERTIFICATION

This appliance is listed by LabTest Certification for use in both the United States and Canada. It is tested and certified to the following US and Canadian gas appliance standards.

- ANSI Z21.88b-2002 / CSA 2.33b-2002, Vented Gas Fireplace Heaters and
- CAN/CGA-2.17-M91, Gas-Fired Appliances for Use at High Altitudes.

Please contact Archgard Industries Ltd., if you have any questions regarding the certification of this appliance.

INSTALLATION CODES

This appliance must be installed by a qualified gas appliance installer.

The installation must conform with the local codes or, in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1 or the current *CAN/CGA B149, Installation Codes*.

The appliance, when installed, must be electrically grounded in accordance with local codes or, in absence of local codes, with the *National Electrical Code, ANSI/NFPA 70*, or the *Canadian Electrical Code, CSA C22.1*.

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

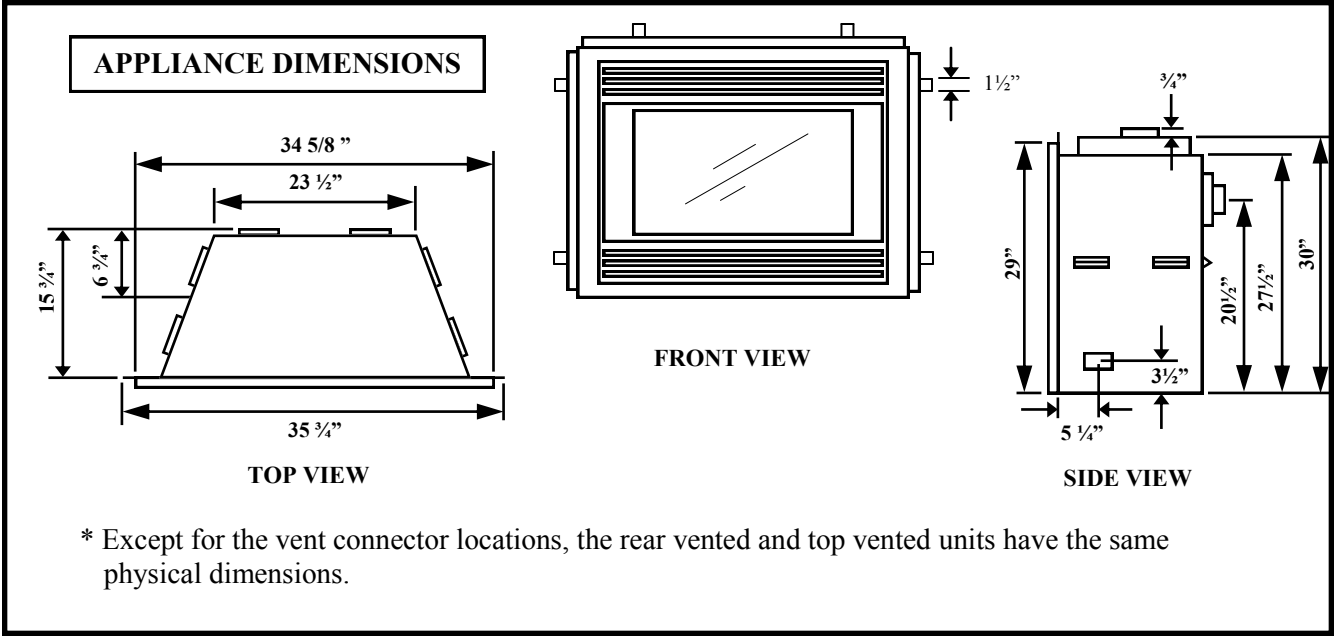
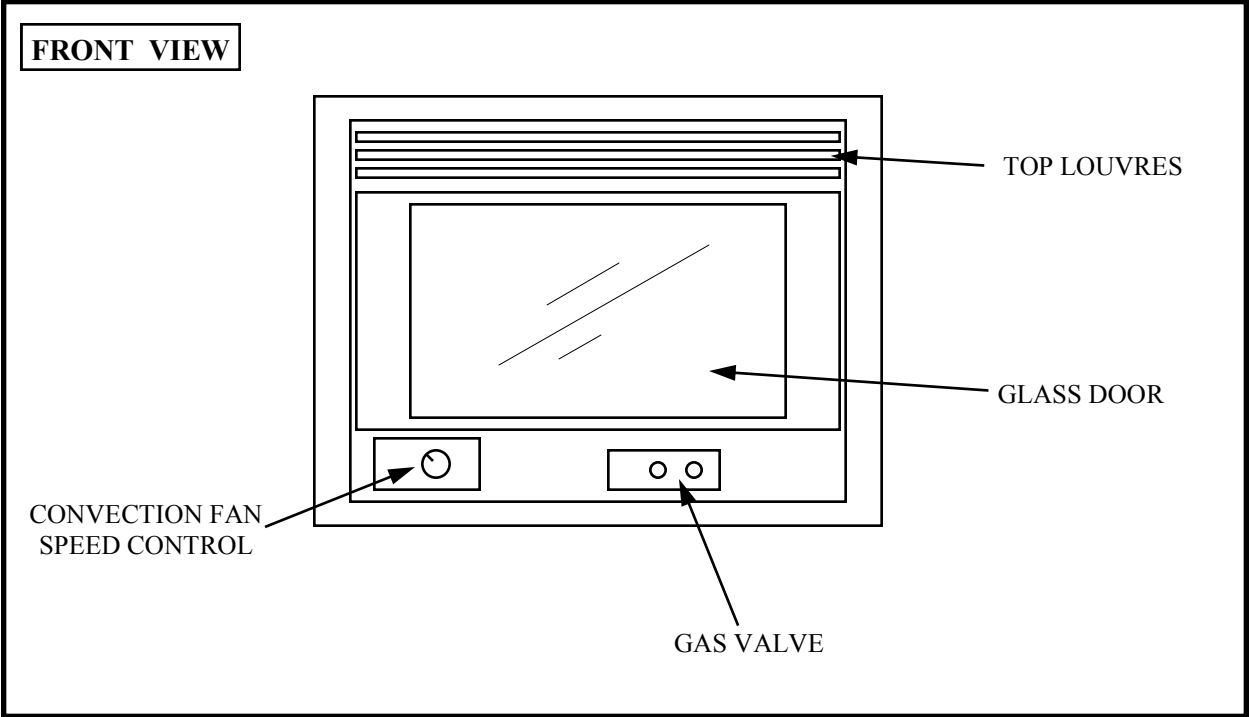
SPECIFICATIONS

	Natural Gas (NG)	Propane (LP)
Manifold Pressure	1.6 - 3.5 in. w.c. (0.4 - 0.9 kPa)	6.3 - 10.0 in. w.c. (1.5 - 2.5 kPa)
Minimum Supply Pressure for Purpose of Input Adjustment	4.5 in. w.c. (1.2 kPa)	11.0 in. w.c. (2.8 kPa)
Orifice Size	#45 DMS (2.18 mm dia.)	#55 DMS (1.32 mm dia.)
Nominal Input Rating	13,000 - 20,000 BTU/hr (3.8 -5.8 kW)	15,000 -20,000 BTU/hr (4.4 - 5.8 kW)
Altitude	0 - 4,500 ft. (0 - 1372 m)	0 - 4,500 ft. (0 - 1372 m)
Primary Air Opening	¼ in. (6 mm)	Full open

HIGH ALTITUDE INSTALLATION

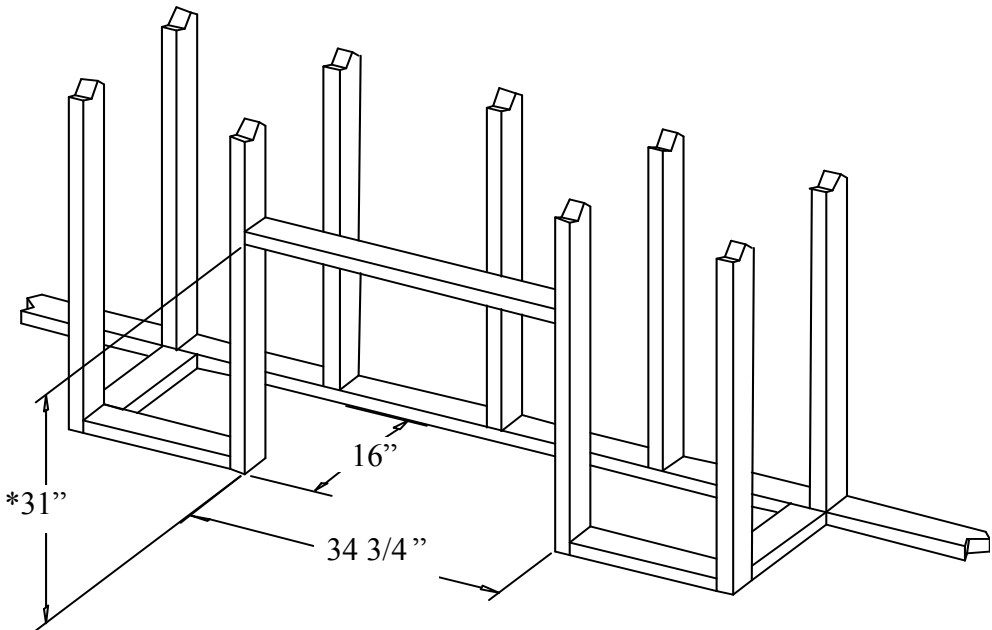
When installing this appliance beyond 4500 ft. (1372 m) above sea level, the appliance must be properly de-rated and installed according to local codes; in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1/ NFPA 54, in the US or Installation Code, CAN/CGA-B149, in Canada.

APPLIANCE DESCRIPTION & DIMENSIONS

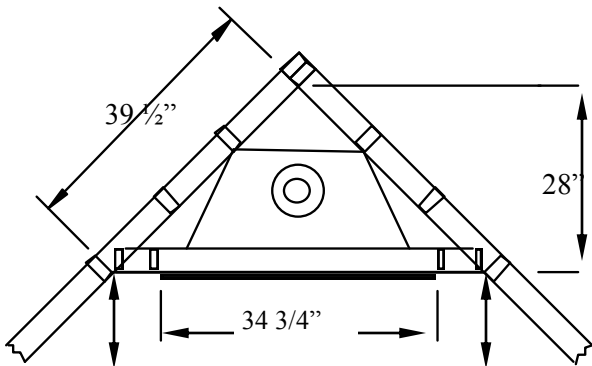
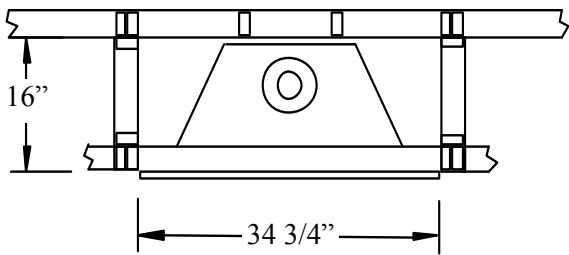


FRAMING DIMENSIONS

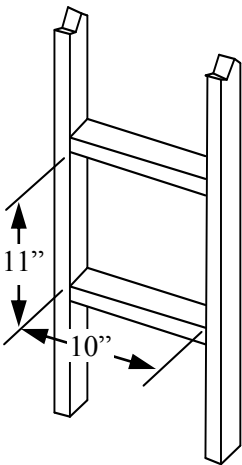
FRAMING DIMENSIONS



* If more rigidity is required, a stud may be added to the back of the top nailing flange after the fireplace is installed.



TERMINATION FRAMING



Please allow 6" sidewall clearance on each side

CLEARANCE TO COMBUSTIBLES

PRECAUTIONS

- This appliance must be installed by a qualified gas installer and the installation must conform to the installation codes.
- Provide adequate clearance around air openings of the appliance. Never obstruct front openings.
- Provide adequate clearances for proper operation and servicing of the appliance.
- This appliance must be properly connected to a venting system.

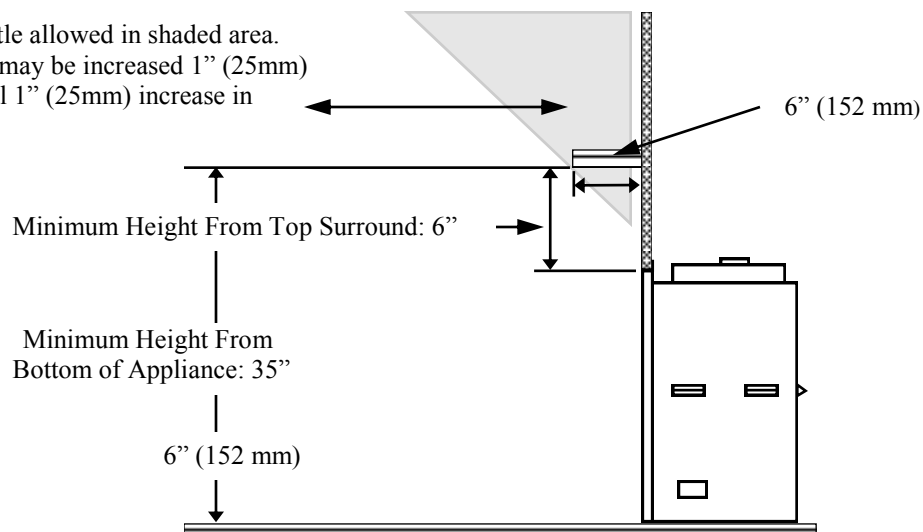
CLEARANCES TO COMBUSTIBLES

BACK	0" to stand-offs
SIDES	0" to stand-offs
TOP	0" to stand-offs
BOTTOM	0"
ADJACENT SIDE WALL	1" to side of faceplate
MANTLE	see diagram
VENT	1" to outside side and bottom surface 2" to outside top surface.

NOTE: Low profile wooden crowns and moldings above the unit are not considered as mantles. I.E. 1" or less protrusions on the upper mantle facing are acceptable

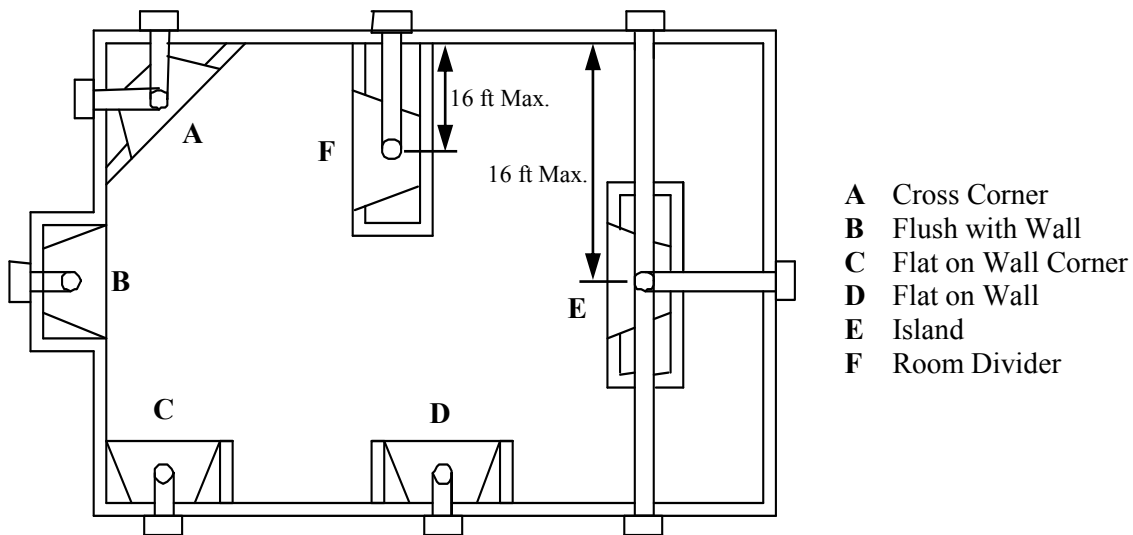
Combustible mantle allowed in shaded area.

Mantle extension may be increased 1" (25mm) for each additional 1" (25mm) increase in clearance height.



POSSIBLE FIREPLACE LOCATIONS**LOCATING GAS FIREPLACE**

This appliance must be installed in a location that is free of plumbing, electrical wiring and heating or air conditioning ducts. Select a location that is accessible for venting. See APPENDIX A. ALLOWABLE TERMINATION LOCATIONS.



***NOTE: The rear vented gas fireplace can only be located in positions A, B, C and D.**

**REFER TO THE VENTING SECTION OF THIS MANUAL FOR
ALLOWABLE VENTING CONFIGURATIONS**

VENTING INSTRUCTIONS

VENTING

The appliance will not function without being connected to a proper venting system.

This appliance may use 4" and 7" gas flex vents with NorthFire 3400 listed vent components, or Simpson Duravent 4 x 6 5/8 direct vent systems with Simpson Duravent Adaptor (999-DV-SDA). 7" dia. rigid vent may directly replace 7" dia. flex vent in all applications.

For best venting performance using gas flex vent, here are some general venting rules that we recommend:

1. Use only 4" and 7" diameter 2-ply certified gas flex vent in a co-axial configuration.
2. Maintain a minimum clearance of 1" to the sides and bottom and 2" to the top outside surface of the vent pipe and combustible material.
3. Observe any local code restrictions, if any, regarding the installation of this type of gas appliance.
4. Observe the venting chart given in this manual.
5. Use a vent spacer between the inside and outside flex vents at 3 ft intervals.
6. Never slope horizontal running vents downwards.
7. Maintain at least an upward slope of 1" for every 1 ft of horizontal run on the rear vented models.
8. Terminate the vent with a vent termination supplied by Archgard Industries Ltd.
9. Support horizontal running vents every 3 ft to prevent it from sagging.
10. Wall terminal must be installed a minimum of 12" above grade measured from bottom of terminal.

VENT TERMINATION

1. See "ALLOWABLE TERMINATION LOCATIONS" diagram (page 13) to establish a suitable vent termination location.
2. In heavy snowfall areas make sure vent termination is located where it can not be blocked by snow or snow from snow removal equipment.
3. Locate vent termination away from plants, bushes or any other object on or near the vent termination that will interfere or obstruct the air flow around it.
4. DO NOT recess vent termination into walls, sidings or planters.
5. Vent terminations located below 7ft from grade level or anywhere it can be a burn hazard to the public, such as patios and balconies, must be protected with an Archgard-approved termination cage.
6. Always ensure bottom of Vent Terminal is a minimum of 12" above grade.

VENTING FOR REAR VENTED APPLIANCES

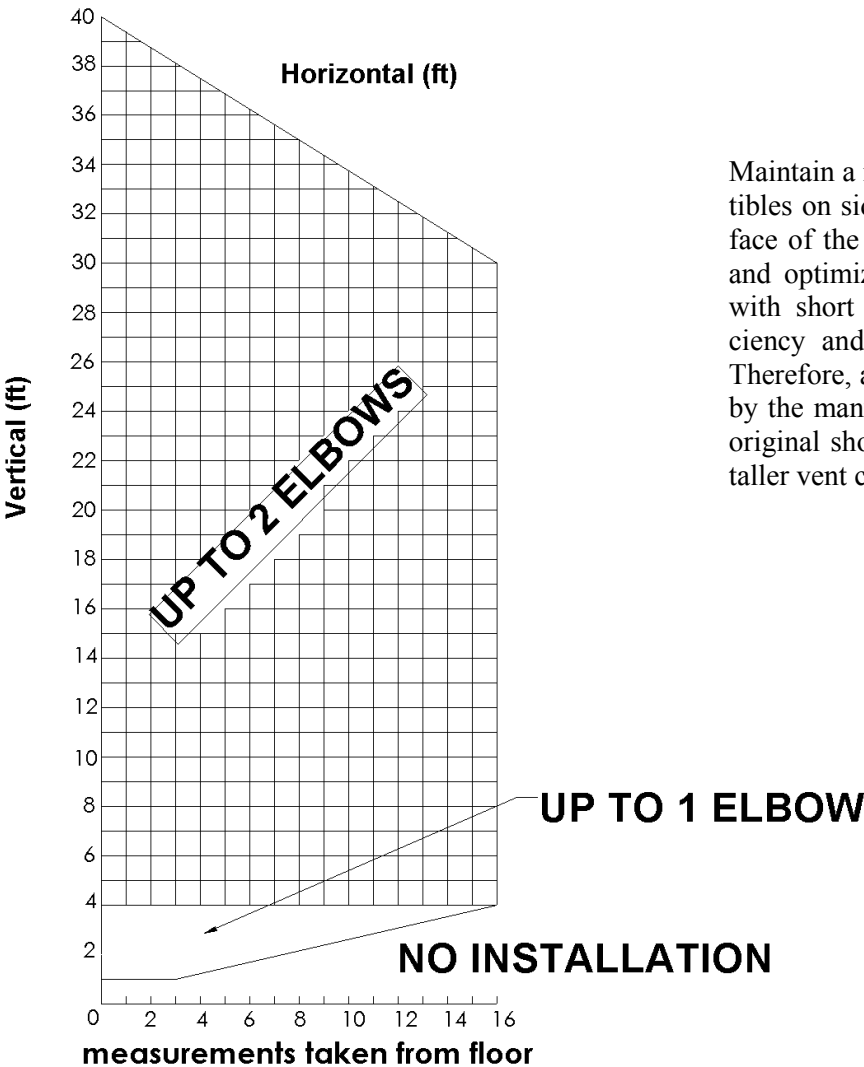
- Maximum horizontal vent length straight out the back of the unit is 3ft.
- Maximum of one 45° elbow is allowed.
- Maintain 1" vertical rise minimum per foot of horizontal length beyond 6". ie: no vertical rise is required for a 6" horizontal vent straight out the back of the fireplace.
- For rear vent configurations other than above please refer to the vent charts on page 11 and vent restrictor chart on page 12..

Follow the venting instructions as strictly as possible to obtain the best performance from the appliance.

****Top/Rear Conversion Instructions Pg. 30****

VENTING INSTRUCTIONS

Top/Rear Vent Units



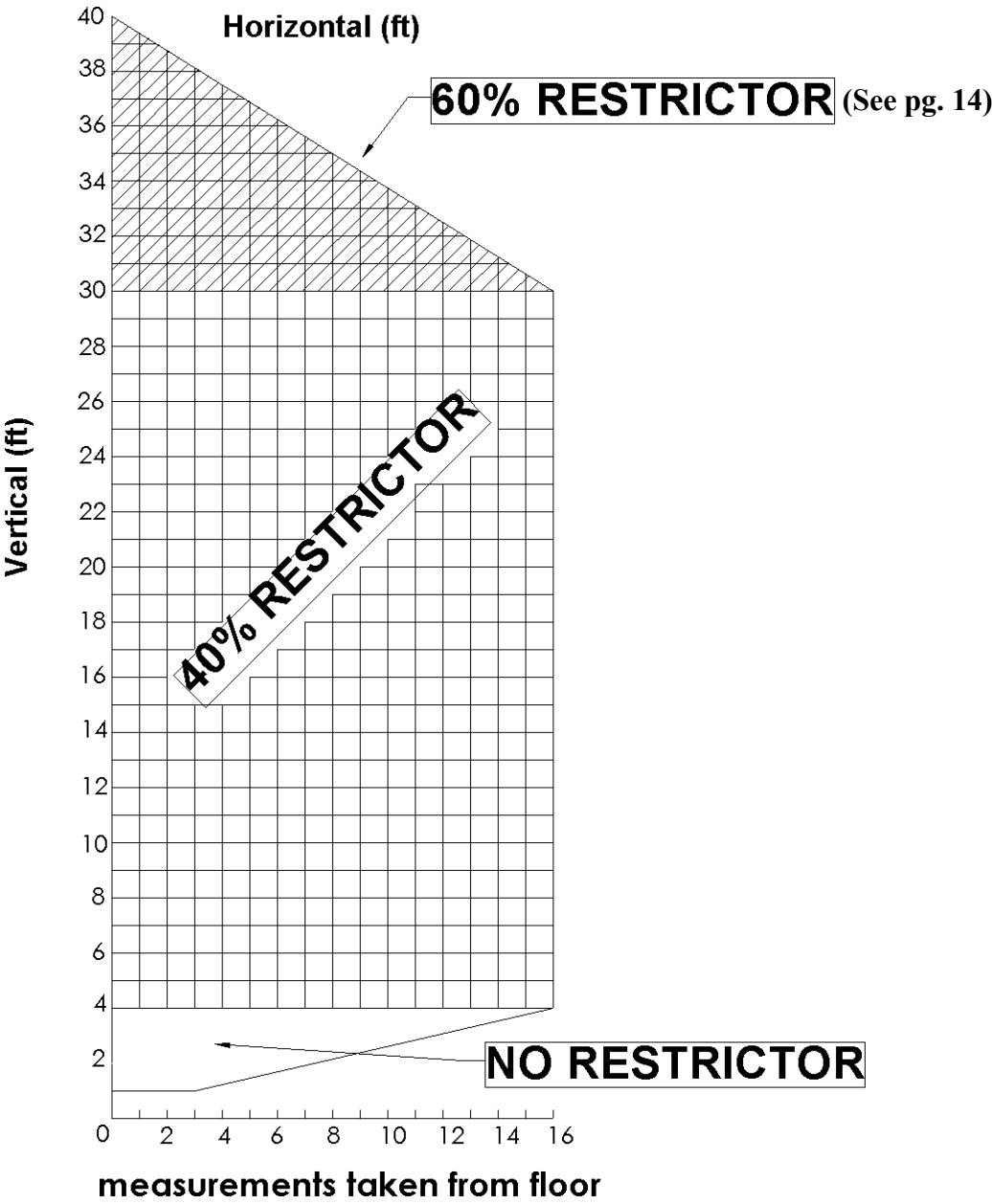
Maintain a minimum of 1” clearance to combustibles on sides and bottom and 2” from top surface of the vent. The gas fireplace is designed and optimized for majority of the installations with short vents. With taller vents, the efficiency and flame characteristics will change. Therefore, an exhaust restrictor plate is provided by the manufacturer to preserve as much of the original short vent performances as possible on taller vent configurations.

Rear Vent Units

Maximum Horizontal run for Rear Vent is 36” from the back of the unit to termination or 16” with a 45° elbow

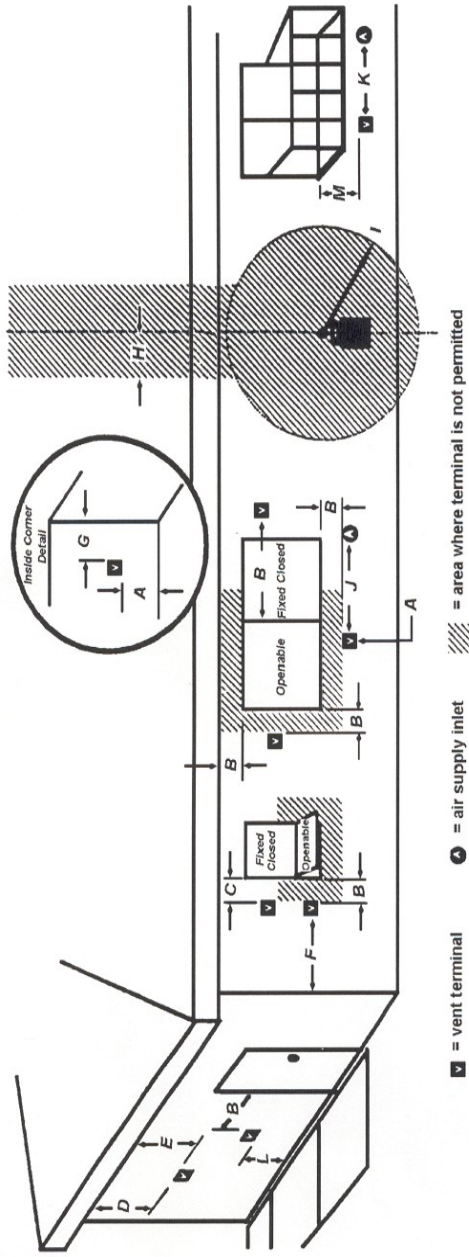
VENTING INSTRUCTIONS

RESTRICTOR INSTALLATION



VENTING INSTRUCTIONS

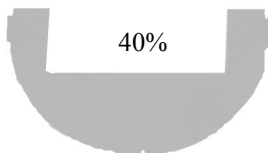
ALLOWABLE TERMINATION LOCATIONS.



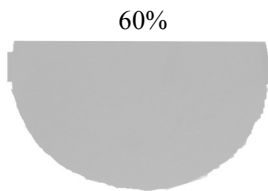
	Canadian Installations (1)	US Installations (2)	Canadian Installations (1)	US Installations (2)
A= Clearance above grade, veranda, porch, deck, or balcony	12 inches (30 cm)	12 inches (30 cm)	J= Clearance to non-mechanical air supply inlet to building or the combustion air inlet of any other appliance	9 inches (23 cm)
B= Clearance to window or door that may be opened	12 inches (30 cm)	12 inches (30 cm)	K= Clearance to a mechanical air supply inlet	3 feet (91 cm) above if within 10 feet (3 m) horizontally
C= Clearance to permanently closed window	*	*	L= Clearance above paved sidewalk or paved driveway located on public property	*
D= Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*	*	M= Clearance under veranda, porch, deck, or balcony	*
E= Clearance to unventilated soffit	*	*	<div>(1) In accordance with the current CSA B149.1, <i>National Gas and Propane Installation Code</i> (2) In accordance with the current ANSI Z223.1/NFPA 54, <i>National Fuel Gas Code</i> (+) A vent shall not terminate directly above a side walk or paved driveway that is located between two single family dwellings and serves both dwellings (++) Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor. (*) For clearances not specified in ANSI Z223.1/NFPA 54 or CSA B149.1, "Clearances shall be in accordance with local installation codes and the requirements of the gas supplier."</div>	
F= Clearance to outside corner	*	*		
G= Clearance to inside corner	9" (22.5cm)	9" (22.5cm)		
H= Clearance to each side of center line extended above meter/regulator assembly	3 feet (91 cm) within a height 15 feet (4.5 m) above the meter/regulator assembly	*		
L= Clearance to service regulator vent outlet	3 feet (91 cm)	*		

VENTING INSTRUCTIONS Cont...**RESTRICTOR PLACEMENT “FOR ABOVE 4 FOOT VERTICAL RISE VENTED APPLICATIONS ONLY”**

WARNING: These restrictors are only to be installed in the vent system if the vent exceeds 4’ in vertical height. *See below which restrictor is required. **Installing them under any other circumstances may cause hazardous venting conditions and may result in personal injury, property damage or death.**



Vertical Venting between Four Feet (4’) and Thirty Feet (30’) requires Restrictor Number 1 as per the Venting Chart on page 12.



Vertical Venting between Thirty Feet (30’) and up to a maximum Forty Feet (40’) requires Restrictor Number 2 as per the Venting Chart on page 12.

NOTE: Vent restrictors are designed to reduce vertical stack action for above 4 feet (4’), which will reduce the velocity of incoming combustion air and not adversely affect the standing pilot or the flame of the appliance.

Archgard System

In the Archgard system the restrictors are placed on the exhaust outlet on the appliance.

Simpson Duravent

With Simpson Duravent locate the restrictor in the exhaust section fitting into the formed lip.

Simpson Duravent**Archgard System****Restrictor Placement**

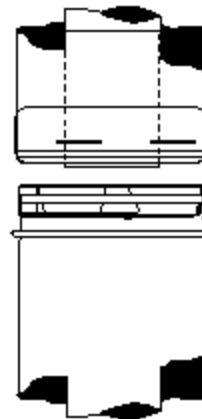
VENTING INSTRUCTIONS Cont...

The rigid vent systems use twist lock connections. The adaptor attached to the unit connects to the approved venting system. Assemble the vent system using the desired combination to sections and fittings required for your particular installation. While you are assembling the pipe bear in mind the best visual appearance. Seams should be aligned and hidden as much as possible. Make sure you twist the mating section all the way to make a solid connection.

Note: As this system is a sealed system, a high temperature sealing compound must be used to seal the metal to metal joint.

Vent Pipe Assembly Procedure

The female section of the pipe/fitting has four indentations evenly spaced around the pipe. These indentations are designed to slide over the male section of the pipe and locate into the four entry slots of the male section of pipe. Twist the female section clockwise a quarter turn to fully lock the sections together.



GAS CONNECTION INSTRUCTIONS

GAS CONNECTIONS

Before connecting the appliance to the gas supply line, double check that the appliance you have purchased is designed for the gas type you are using. The gas type markings are located on the certification label and also on the appliance's gas valve.

Provide adequate clearance for proper installation and checking of the gas connections.

Have your gas supplier or a qualified gas fitter run a gas supply line into the gas fireplace. The line must be properly sized and fitted according to the installation codes. Upstream of the appliance supply connection, the fitter shall provide an easily accessible manual shut-off valve.

CAUTION: The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa). Failure to do so will damage the appliance's gas valve. Such damage is not covered by the manufacturer's warranty.

Check for proper gas supply pressure by loosening the set screw on the supply pressure tap (marked **IN**) on the gas valve with a small flat tip screw driver and placing a test gauge on the tap.

The minimum permissible gas supply pressure is 4.5 in. w.c. (1.12 kPa) for natural gas and 11.0 in. w.c. (2.74 kPa) for propane. Maximum gas supply pressure should never exceed 14.0 in. w.c. (3.48 kPa) or 1/2 psi. for both natural gas and propane.

BE SURE TO TIGHTEN THE PRESSURE TAP SET SCREW AFTER CHECKING THE PRESSURE. CHECK ALL GAS CONNECTIONS FOR GAS LEAKS.

GLASS DOOR INSTRUCTIONS

Removing the Glass Door

- ◆ Remove the top & bottom louvers (or optional front).
- ◆ Unhook the door latches found on the bottom of the firebox.
- ◆ Carefully lift and remove the door.
- ◆ Place the door at a safe location where it cannot be scratched or damaged.
- ◆ If the glass door is damaged, it **must** be replaced with another glass door certified with this appliance **only**.
- ◆ Replacement glass doors are available through your Archgard dealer
- ◆ See Replacement Parts page 29

Replacing the Glass Door

- ◆ Check the condition of the glass and the gasket before installing door.
- ◆ Carefully hook the door onto the tabs on the top of the firebox.
- ◆ Connect the door latches, at the bottom of the door, and close latches.
- ◆ Install the top & bottom louvers (or optional front).

If the glass has been damaged contact your dealer and replace the door assembly with a new assembly provided by your dealer.

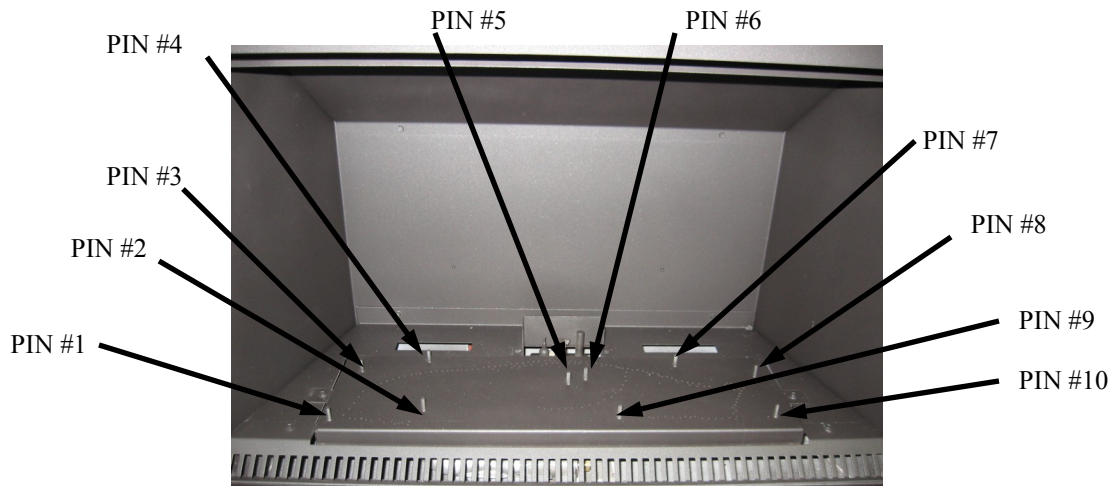
WARNING:

- Do not attempt to remove the glass door when the appliance is hot.
- Do not abuse the glass door.
- Do not strike or slam the glass.
- Do not operate this appliance with cracked or broken glass.
- Do not use any substitute materials.

In the event your glass cracks or breaks, it must be replaced by the exact same size and material. It is made from high temperature ceramic material. See replacement parts list on Pg. 29 and contact your nearest Archgard Dealer

LOG PLACEMENT INSTRUCTIONS

PIN NUMBERS AND LOCATIONS



PLACEMENT OF LOGSET



Step 1: Place rear right log on pin numbers 7 and 8 with the left side of the log resting on the pilot shield so as to allow secondary air to pass under the log.



Step 2: Place rear left log on pin numbers 3 and 4 with the right side of the log resting on the rear right log so as to allow secondary air to pass under the log.



Step 3: Place left front log on pin numbers 1 and 2 as shown.



Step 4: Place right front log on pin numbers 9 and 10 as shown.



Step 5: Place the center log on pin numbers 5 and 6 with the larger branch facing forward between the front left and right logs.



Step 6: Place the coals on top of the burner so as not to block any of the burner ports or the secondary air flow under the two rear logs



REPLACEMENT LOGS

310-63400-1	Right Rear Log
310-63400-2	Left Rear Log
310-63400-3	Left Front Log
310-63400-4	Right Front Log
310-63400-5	Middle Chunk Log
310-0020	Black Embers
310-63400	Complete Log Set

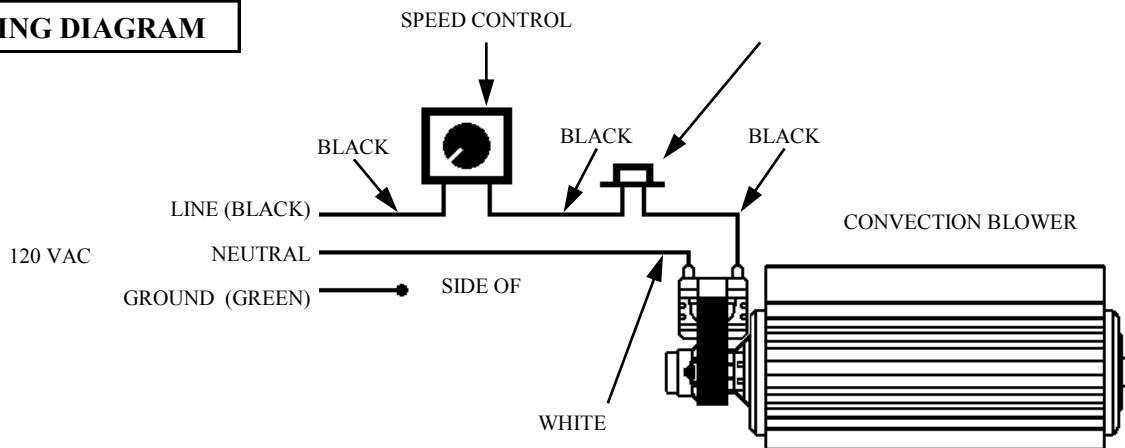
WARNING : Do not place the logs branches in any configuration other than the one shown, a fire, explosion or excessive carbon monoxide (CO) may result, causing property damage, personal injury or loss of life.

FAN & VALVE WIRING DIAGRAM/INSTRUCTIONS

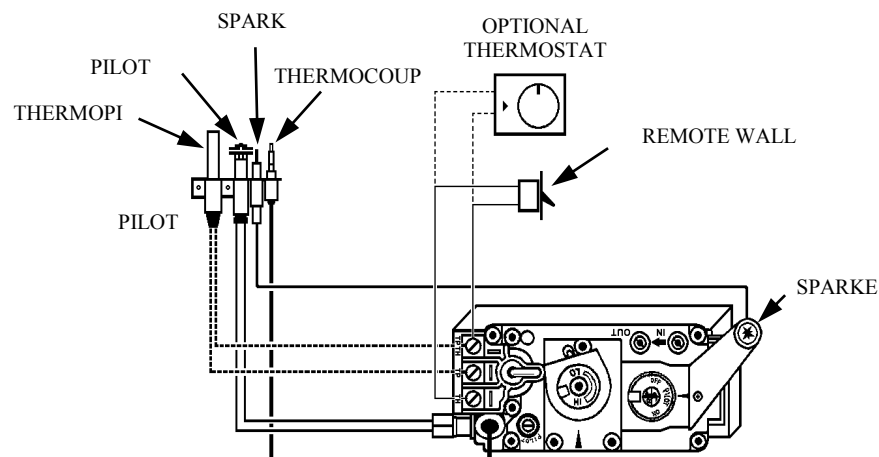
ELECTRICAL CONNECTIONS (for optional convection fan kit 999-DV-FK only)

- Install the fan first. Remove the lower louvers and gently place the bottom front lip of the blower mounting bracket into the opening. Slide the blower assembly into the bottom of the fireplace. Rotate the blower into position. Be careful not to damage the fan blades. The fan blades will now face towards you. Line up the holes on fan bracket to the mounting bracket at the bottom of the fireplace. Place a screw at each of the three holes and tighten.
- Run 120VAC power line through the left side of the fireplace and into the bottom of the gas fireplace.
- Be sure to connect a grounding wire to the side of gas fireplace. Use any screw hole on the side for this purpose.
- Slide the thermal snap switch into the fork like bracket underneath the left side of the firebox.
- Neatly tie down and tuck the wires down at the bottom and to the back of the fireplace.
- **CAUTION:** Do not allow any wires to touch the bottom of the firebox. Otherwise, the wires will melt and short-out.
- Screw the speed controller bracket to the bottom left sidewall of the gas fireplace.

WIRING DIAGRAM



VALVE CONNECTIONS



INITIAL START-UP INSTRUCTIONS

FOR YOUR SAFETY, READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

Do not try to light any appliance.

Do not touch any electric switch; do not use any phone in your building.

Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.

If you cannot reach your gas supplier, call the fire department.

- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

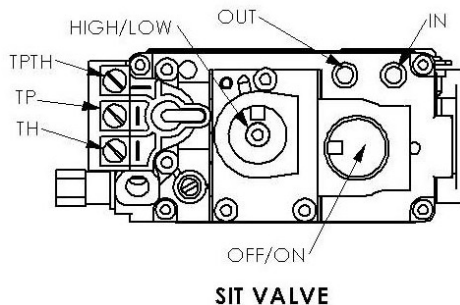
LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electric power to the appliance.
4. Controls are accessed by opening the bottom louver.
5. Push in gas control knob slightly and turn clockwise to "OFF".
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
7. Turn control knob counterclockwise to pilot position.
8. Depress control knob and push in piezo igniter button. Once pilot ignites continue to hold the control knob in for one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 4 – 7. If knob does not pop up when released, stop and immediately call your service technician or gas supplier. If the pilot will not stay lit after several attempts, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn gas control knob counterclockwise to "ON". Turn on all electric power to the appliance. Set thermostat to desired setting or turn appliance switch to "ON" position then close bottom louver.

TO TURN GAS OFF TO APPLIANCE

1. Set thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Push in gas control knob slightly and turn clockwise to "OFF", do not force.

Note: The valve is equipped with a safety lockout, once in the "OFF" position you must wait until the thermopile has cooled before attempting to light the pilot (approximately 3 minutes).



MAINTENANCE

CAUTION : Only conduct maintenance on a cold appliance.

CLEANING THE APPLIANCE

The exterior painted surfaces, glass and gold trims may be cleaned with a soft, non-abrasive cloth and water or a suitable, mild, non-abrasive cleaner.

Regularly:

- Clean and remove any lint accumulations or debris from the grills and in any combustion and convection air passageways.
- Keep the appliance area free from combustible materials, such as paper, wood, clothing, gasoline and flammable solids, liquids and vapors.
- Visually check the height and color of the burner and pilot flames.
- Check for unusual noise, odor and operation of the appliance.
- Check the vent terminal for any damage, or obstruction by plants or debris accumulation.

Once a year:

- Remove the glass door and clean the inside of the glass with a soft, non-abrasive cloth and water or a suitable, mild, non-abrasive cleaner.
- Carefully remove the logs and gently brush off any loose carbon deposits. This job is best done outside the house, wearing a dust mask. The logs are very fragile, take care not to break them. After cleaning, the logs must be replaced as per the instructions in this manual.
- When replacing glass door, ensure the gasket is still secure all around the edge of the glass and it is sealing against the firebox frame. Replace the gasket if worn, damaged or falling off.

Once a year, have a qualified service technician:

- Completely inspect the appliance and the venting system.
- Clean and remove any lint accumulations or debris in the firebox, on the burners, on the pilot, at the primary air opening, on the convection air blower and in any combustion and convection air passage ways.
- Check the safety system of the gas valve.
- Check condition of both glass door gasket and top pressure relief door gasket. Replace if damaged or worn

WARNING: All parts removed or disturbed must be properly replaced after maintenance. Service and repair must be conducted by a qualified service person. If these instructions are not followed, a fire or explosion may result, causing property damage, personal injury or loss of life

TROUBLESHOOTING

Please check to make sure the instructions are followed exactly before attempting troubleshooting of the appliance.

WARNING: Troubleshooting and servicing of gas and electrical devices of the appliance should only be conducted by a qualified service technician.

SYMPTOM	ACTION
Pilot will not light after pressing the sparker many times.	<ol style="list-style-type: none"> 1. When lighting the appliance for the first time after installation or after servicing, there is air in the gas line. It takes a while for all the air to purge out of the pilot before gas can reach the pilot and ignite. Remove the glass door and try lighting the pilot many times to purge the air. 2. Check to make sure the gas supply to the appliance is turned on and there is adequate gas supply pressure to the appliance. 3. Check for sparks between the spark electrode and the pilot head when the sparker is pressed. If there are no sparks, <ol style="list-style-type: none"> a. Check for broken or poor connection from the sparker to the electrode. b. Check for the spark shorting or arcing at other locations. c. Check for defective sparker. d. Check for defective spark electrode. 4. With the door removed, try lighting the pilot with a match. <ol style="list-style-type: none"> a. If air is blowing on the flame of the match, hold the control knob in at the 'PILOT' setting until all the air is purged out of the line. b. If there is no gas or air coming out of the pilot and there is gas pressure to the appliance, the pilot orifice may be blocked or the gas valve may be defective.
Pilot will not remain on after being lit.	<ol style="list-style-type: none"> 1. Press the control knob all the way in. 2. Hold the control knob in for a longer period of time. 3. If you are trying to re-light the pilot immediately after you have shut-off the pilot, you have to wait a few minutes for the valve to reset. 4. Check to see if the pilot flame is large enough to reach and surround the thermocouple. If the flame is too small, check for correct gas supply pressure. If pressure is good, adjust the pilot flame size with the adjustment screw on the valve. If the flame cannot be adjusted, there might be some debris obstructing the pilot orifice. 5. Check for poor connection of the thermocouple to the valve. 6. Check for proper millivolts of the thermocouple. The thermocouple should generate at least 30 mV or it is defective. 7. Check for defective gas valve.
The main burner does not turn on with the pilot lit.	<ol style="list-style-type: none"> 1. Check to make sure the control knob is turned to the 'ON' position. 2. The thermopile takes a bit of time to heat up and generate enough voltage to activate the valve. Wait a little longer.

TROUBLE SHOOTING Cont...

SYMPTOM	ACTION
The main burner does not turn on with the pilot lit. Cont...	<ol style="list-style-type: none"> 3. Check to make sure the thermostat is set high enough to turn on the appliance. 4. Check that the remote switch or the thermostat is turned on. 5. Check for weak pilot flame. If flame is weak, check gas supply, check pilot flame adjustment and check for blockage of pilot orifice. 6. Check for 400-500 mV from the thermopile with the burner off and 200-250 mV with the burner on. If the voltages are lower, the thermopile is defective. 7. Check for defective gas valve.
The main burner shuts off when the appliance is warm.	<ol style="list-style-type: none"> 1. This may be the normal operation of a wall thermostat installed to appliances. 2. Check for good pilot flames on the thermopile. 3. Check for good voltage from the thermopile.
Sooty deposits on the glass door.	<ol style="list-style-type: none"> 1. If the flame is yellow and lazy, increase primary air by opening the primary air shutter. 2. Check for proper placement of the logs and branches. See that section in the instruction manual. 3. Check for obstruction of the burner ports by the embers. See that section in the instruction manual. 4. Check for proper venting and blockage of the vent termination. 5. Check manifold pressure and clock input rating.
Sharp blue flames with flames lifting off the burner at the ends.	<ol style="list-style-type: none"> 1. Too much primary air. Reduce primary air by closing the primary air shutter. During cold temperatures, some flame lifting may occur during start-up.
Convection blower does not turn on.	<ol style="list-style-type: none"> 1. The convection fan is thermostatically controlled. It will only turn on when the appliance is warmed-up. This may take 5 to 15 minutes with the appliance on high. 2. Check for 120VAC electrical supply to the appliance. 3. Check for proper mounting of the thermal snap disc. 4. Check electrical connections. 5. Check for defective thermal snap disc. 6. Check for defective convection blower speed controller. 7. Check for defective convection blower.

SERVICING

SERVICING UNDER WARRANTY

Before servicing, read the terms and conditions of the Archgard warranty at the back of the manual. Contact the Archgard authorized dealer which you have purchased the appliance from and provide him with details of the problem and the installation information which the installer has fill out at the back of the manual.

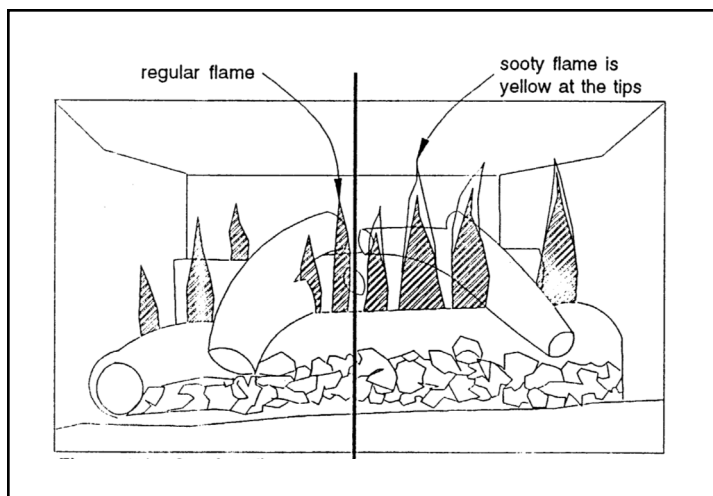
WARNING: Servicing of this appliance **must be conducted by a qualified service technician**. Improper servicing, adjustment or alteration of this appliance may cause property damage, personal injury or loss of life. All servicing should be conducted with the appliance cold. All replacement parts must be authorized by Archgard for suitability.

ADJUSTING PRIMARY AIR

Note: the Shutter is set at the factory and normally only requires setting at higher altitudes.

- The primary air adjustment wing nut is located on the bottom side of the valve tray behind the lower louver
- Loosen the wing nut and slide the primary air shutter screw to the right to decrease primary air and to the left to increase primary air. **WARNING: Any Adjustment to Primary Air Should Only Be Attempted by a Qualified, Licensed Gas Fitter or Service Person.**
- Tighten the wing nut to the air shutter after adjustment.

Caution: Wear gloves when adjusting the primary air with the appliance is hot.



FLAMES... (Reference only)

The left side shows correct adjustment. The right side shows yellow sooty flames requiring increase in shutter opening or cleaning of shutter area due to lint buildup.

SERVICING Cont...**CHANGING MAIN BURNER ORIFICE**

- Remove the glass door, log set and brick panels (if used)
- Remove the burner by removing the screws holding the burner and cover plate
- Use two wrenches to loosen and remove the cap orifice.
- Change the orifice.
- Replace the burner and the log set and brick panels if used.
- Test fire the appliance with the glass door off and check for gas leaks.
- Replace the glass door.

CHECKING INLET AND OUTLET GAS PRESSURE

- Open the lower grills.
- The pressure test taps are located on the valve.

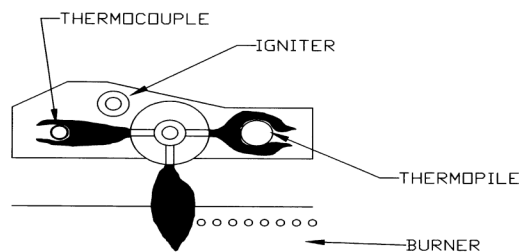
Automatic valve: The taps are located in the front. The inlet is marked '**IN**' and the outlet is marked '**OUT**'. There is also an arrow marking the direction of gas flow.

Manual valve: The taps are located on the left side of the valve. The connection closest to the back, marked with '**IN**' is the inlet and the outlet marked with '**OUT**' is closest to the front.

- Loosen the set screw inside the tap with a 1/8" wide flat screw driver.
- Connect a 1/4" rubber tube to the tap and to the manometer.
- Be sure to tighten the set screw inside the tap after you are finish taking pressure readings.
- Check for leaks.

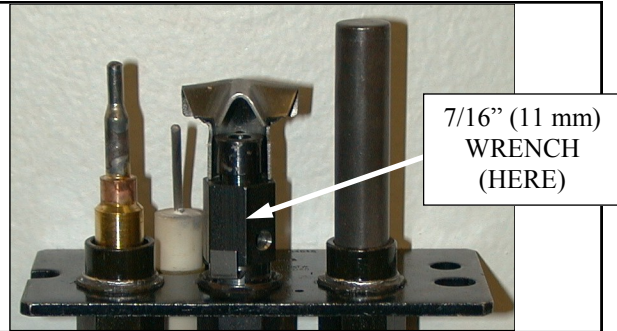
CHECKING AND ADJUSTING PILOT

The pilot flame should have the characteristic as shown in the illustration below. The flame should not have yellow tips but should engulf the thermocouple and thermopile. It can be adjusted by turning the screw marked "pilot" on the control valve.



SERVICING Cont...**CONVERTIBLE PILOT ORIFICE**

The pilot assembly is convertible to the type of gas being used; simply unscrew the body by using a 7/16" (11 mm) wrench turn a ¼ open then push the small metal tab across to the other side of the body and retighten. **Call your local Authorized Archgard Dealer to purchase the correct fuel conversion kit for your gas appliance.**

**IF YOUR GLASS BREAKS**

In the event your glass cracks or breaks, it must be replaced by the exact same size and material. It is made from high temperature ceramic material. See replacement parts list and contact your nearest Archgard dealer.

- Remove door and carefully remove all traces of glass and gasket material. See page 16 for glass door removal.
- Clean glass frame & ensure no "old" gasket or glue remains.
- Install new glass and gasket. The "thicker" side of the gasket fits against the fireplace opening.
- Hold glass in place by using the sealer between gasket and door. Use sparingly so that no excess will be visible. **DO NOT PUT ANY SEALER BETWEEN GLASS AND UNIT OPENING.**
- Replace the door carefully making sure all clamps are closed.

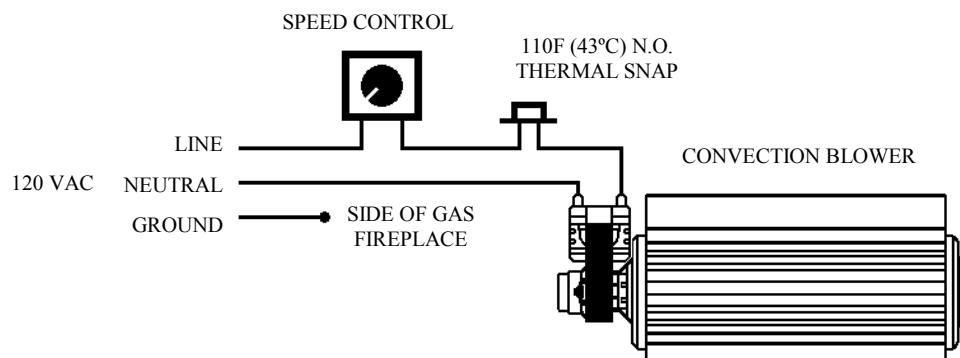
SERVICING Cont...**REPLACING VALVE PLATE ASSEMBLY**

- Disconnect electricity to the appliance. (If equipped with Optional Fan Kit)
- Remove the glass door and the logs. See glass door instructions.
- Remove the burner tray by loosening and removing the two mounting screws located on the burner cover and burner.
- Shut off the gas to the appliance and disconnect the gas line to the appliance.
- If the appliance has a remote switch or thermostat, disconnect their wires at the front of the valve.
- Remove the four screws holding the gas component assembly plate to the appliance.
- Gently lift the assembly up and tilt the back up to clear the front of the valve from the opening.
- Replacing the assembly is the reverse of the above instructions.

REPLACING CONVECTION BLOWER

See Pg. 20, Fan and Valve Wiring Diagram

- Remove the gas component (valve plate) assembly, see above.
- See fan wiring diagram. See above.
- Mark all wires to be removed for proper reassembly. **CAUTION:** Wiring errors cause improper and dangerous operation.
- The convection blower is located at the bottom of the appliance at the back. Remove the three screws holding the blower.
- Lift the blower out and disconnect the wires from the blower.

WIRING DIAGRAM

SERVICING Cont...

Caution: Do not service appliance while it is operating or still hot.

Cleaning the Appliance: The exterior surfaces and glass may be cleaned with a soft, non-abrasive, cloth and water or a suitable mild, non-abrasive cleaner.

Regularly

- Clean and remove any lint accumulations or debris from the grills and in any combustion and convection air passage ways.
- Keep the appliance area free from combustible materials, such as paper, wood, clothing, gasoline and flammable solids, liquids and vapors.
- Check for unusual noise, odor and operation of the appliance.
- Check the vent terminal for any damage, or obstruction by plants or debris accumulation.
- Visually check the height and color of the burner and pilot flames.

Once a Year,

- Remove the glass door and clean the inside of the glass with a soft, non-abrasive cloth and water or a suitable, mild, non-abrasive cleaner.
- Carefully remove the logs and gently brush off any loose carbon deposits. This job is best done outside the house, wearing a dust mask. The logs are very fragile, take care not to break them. After cleaning, the logs must be replaced as per the instructions in this manual.

Once a Year have a qualified service technician,

- Completely inspect the appliance and the venting system.
- Clean and remove any lint accumulations or debris in the firebox, on the burners, on the pilot, at the primary air opening, on the convection air blower and in any combustion and convection air passage ways.
- Check the safety system of the gas valve.

WARNING :

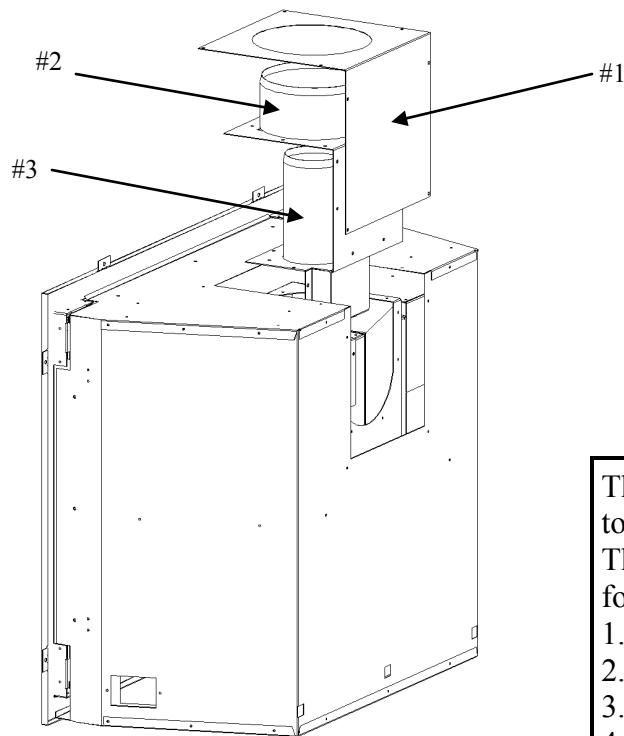
All parts removed or disturbed must be properly replaced after maintenance. Service and repair must be conducted by a qualified service person. If these instructions are not followed, a fire or explosion may result, causing property damage, personal injury or loss of life.

REPLACEMENT PARTS LIST

PART #	ITEM DESCRIPTION	QTY	UNIT
200-1913	OWNERS MANUAL, NORTHFIRE 3400-DVTR20N-2	1	EA
301-0068	ORIFICE CAP, DRILL TO #45 (NATURAL GAS)	1	EA
301-0068	ORIFICE CAP, DRILL TO #55 (PROPANE GAS)	1	EA
307-0016	GLASS, CERAMIC 16.150 X 28.843	1	EA
305-0013	FAN SPEED CONTROL (RHEOSTAT) (FOR OPTIONAL FAN KIT FK-36/38)	1	EA
305-0021	FAN THERMODISC 110 DEG, FAN SENSOR (FOR OPTIONAL FAN KIT FK-36/38)	1	EA
RF-305-0024	FAN, CROSS FLOW 110 CFM (FOR OPTIONAL FAN KIT FK-36/38)	1	EA
308-0007	PIEZO IGNITOR FOR MOUNTING ON NOVA SIT 820 VALVE	1	EA
308-0013	VALVE NOVA SIT 820 MV HI/LOW (NATURAL GAS)	1	EA
308-0035	REGULATOR, PROPANE, FOR CONVERTING 308-0013 VALVE TO PROPANE	1	EA
308-0056	THERMOPILE (REPLACEMENT ONLY)	1	EA
308-0057	THERMOCOUPLE (REPLACEMENT ONLY)	1	EA
308-0093	PILOT ASSEMBLY, PSE TOP MOUNT CONVERTIBLE NG/LP	1	EA
310-63400-1	LOG, RIGHT REAR	1	EA
310-63400-2	LOG, LEFT REAR	1	EA
310-63400-3	LOG, LEFT FRONT	1	EA
310-63400-4	LOG, RIGHT FRONT	1	EA
310-63400-5	LOG, MIDDLE CHUNK	1	EA
310-63400	COMPLETE LOG SET INCLUDES BLACK EMBERS	1	SET
310-0020	BLACK EMBERS	1	EA
314-0000	GASKET, (CERAMIC GLASS) TADPOLE	100	IN
3400-CKLP	CONVERSION KIT-NATURAL GAS TO PROPANE (OPTIONAL)	1	EA

Parts can be ordered through your local dealer or distributor by giving ITEM # and DESCRIPTION.

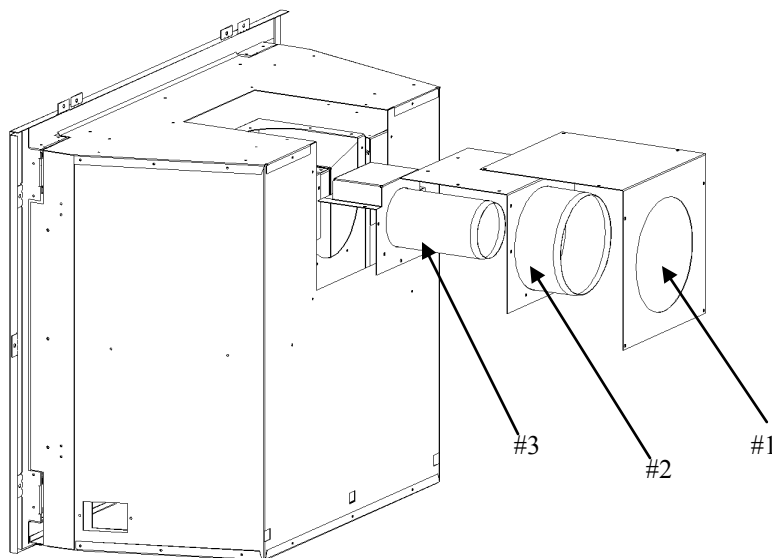
PARTS CAN BE ORDERED THROUGH YOUR LOCAL DEALER OR DISTRIBUTOR BY GIVING ITEM # AND DESCRIPTION.

TOP/REAR VENT CONVERSION

The appliance is easily converted from top vent to rear vent.

The steps for converting are as follows:

1. Remove the vent outer shell cover (#1).
2. Remove the outer collar assembly (#2).
3. Remove the exhaust collar assembly (#3).
4. Rotate the exhaust collar assembly and the outer collar assembly to the rear vent configuration and reinstall.
5. Install vent outer shell cover.



ARCHGARD LIMITED WARRANTY

This Limited Warranty is made by ARCHGARD INDUSTRIES LTD., hereinafter referred to as "Archgard". Archgard warrants to the original purchaser of an Archgard gas burning fireplace (s) that the product will be free of defects in materials and workmanship under normal use and service, for a "lifetime".

INCLUSIONS: "LIFETIME LIMITED WARRANTY"

- ❖ All heat exchangers, combustion chamber, burner tubes and pans.
- ❖ Ceramic Fiber Logs and Ceramic Brick Panels against splitting or cracking.
- ❖ Ceramic Glass against thermal breakage.
- ❖ All 24 K gold trims and accessories against tarnishing.
- ❖ All trim accessories against tarnishing and paint defects.
- ❖ NOTE: Discoloration and some minor movement of certain parts are normal and are not a defect and therefore, not covered under warranty.

The above will be covered "parts & labor" to the original purchaser for FIVE years and "parts" only thereafter from original date of purchase.

INCLUSIONS: "FIVE YEAR LIMITED WARRANTY"

- ❖ Five year limited warranty on the "FiberFlame Technology Burner System." Warranty will cover any defective burner and ceramic ember bed if defect is deemed as original by the manufacturer.

The above will be covered "parts & labor" to the original purchaser for TWO years and "parts" only thereafter from original date of purchase.

INCLUSIONS: "ONE YEAR LIMITED WARRANTY"

- ❖ Blowers, fans and fan motors, wiring, rheostats and thermodiscs.
- ❖ Rocker switches, spill switches and wiring to them.
- ❖ Gas control valves, pilot assemblies including thermopiles, thermocouples, electrodes, and igniters.

The above will be covered "parts & labor" to the original purchaser for ONE year from date of purchase.

EXCLUSIONS:

- ❖ Archgard does not offer wall mounted thermostats, programmable thermostats (wiring for hook-up of said product), handheld remote controls, fireplace mantel (s), trims or tiles.
- ❖ Ember Material.
- ❖ Tempered Glass is warranty for ONE year to the original purchaser from date of purchase.
- ❖ Travel time or mileage to original purchasers residence. Archgard suggests that you pre-arrange travel expenses with your Authorized Archgard Dealer.

WHAT TO DO IN THE EVENT OF A PROBLEM:

- ❖ Thoroughly read your manual.
- ❖ If you cannot solve the problem, contact your Archgard Dealer or representative.
- ❖ When calling for help please have the following information:

Model of your Fireplace	Serial Number	Place of Purchase
Date of Purchase	Problem Description	

- ❖ NOTE: Warranty may be void if work is carried out by an unqualified person (s). Only original Archgard parts may be used. Please consult your Archgard dealer or representative if in doubt about a replacement part (s).

OBTAINING WARRANTY SERVICE:

To obtain warranty service, the original purchaser shall return the defective part (s) to the original authorized Archgard selling dealer transportation prepaid, along with the serial number of the appliance and proof of purchase. Any defective part, in our judgment, will be repaired or replaced at Archgard's discretion. The dealer must obtain approval from Archgard before any repairs are made.

WARRANTY LIMITATION:

THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED AS TO QUALITY, MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

The appliance is only warranted for the use as intended by the installation and operating instruction and local building codes. The warranty will not cover damage due to accident, misuse, abuse, alteration, improper installation or "Acts Of God".

This limited warranty is void unless the appliance is installed by a qualified installer, in accordance with the instructions furnished with the appliance. Some Provinces or States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to the original purchaser. Any damage resulting from defects in this product, is limited to the replacement of the defective part (s) and does not include incidental and consequential exposures sustained in connection with the product. This includes facing (s), mantle (s), cabinet (s), tile (s) or any other finishes resulting from removal of any gas appliance. This warranty is limited to residential use only and gives the consumer specific rights. These rights may vary from State to State or Province to Province.

Postage

WARRANTY REGISTRATION

**ARCHGARD INDUSTRIES LTD.
7116 BEATTY DRIVE
MISSION, B.C. CANADA
V2V 6B4**

FOLD DOWN AT LINE

FOLD DOWN AT LINE & TAPE CLOSED

Model # : **3400-DVTR20N-2** Serial #: _____ Date Installed: _____ / _____ / _____

Name & Address: _____

City/State _____ PC/Zip _____ Phone: (_____) _____

Dealer's Name & Address: _____

City/State _____ PC/Zip _____ Phone: (_____) _____

Installer's Name & Address: _____

City/State _____ PC/Zip _____ Phone: (_____) _____

Why did you choose this product? _____

Thank you for purchasing our product and filling out this warranty card.

ARCHGARD INDUSTRIES LTD.

7116 BEATTY DRIVE
MISSION, B.C. V2V 6B4
CANADA

WEBSITE: WWW.ARCHGARD.COM